

Abstract

A fuel injection valve, having an outer valve needle (15) which by means of a longitudinal motion cooperates with a valve seat (20) for opening and closing at least one outer injection opening (22). An inner valve needle (17) is disposed in the outer valve needle (20) and by its longitudinal motion cooperates with the valve seat (20) for opening and closing at least one inner injection opening (24). The fuel pressure in a control chamber (28) that can be filled with fuel under pressure acts on the outer valve needle (15) and the inner valve needle (17) in such a way that as a result, a closing force in the direction of the valve seat (20) is exerted on the inner valve needle (17) and the outer valve needle (15). An inner pressure face (48) is disposed on the inner valve needle (17), and an outer pressure face (49) is disposed on the outer valve needle (15), which each, on being subjected to pressure, exert a hydraulic opening force, oriented counter to the closing force, on the inner valve needle (17) and the outer valve needle (15). The outer valve needle (15) is at least partly surrounded by an inflow chamber (12), in which fuel under pressure is always present, and the inner pressure face (48) and the outer pressure face (49) are always subjected to the fuel of the inflow chamber (12) (Fig. 1).